

Fig. 1

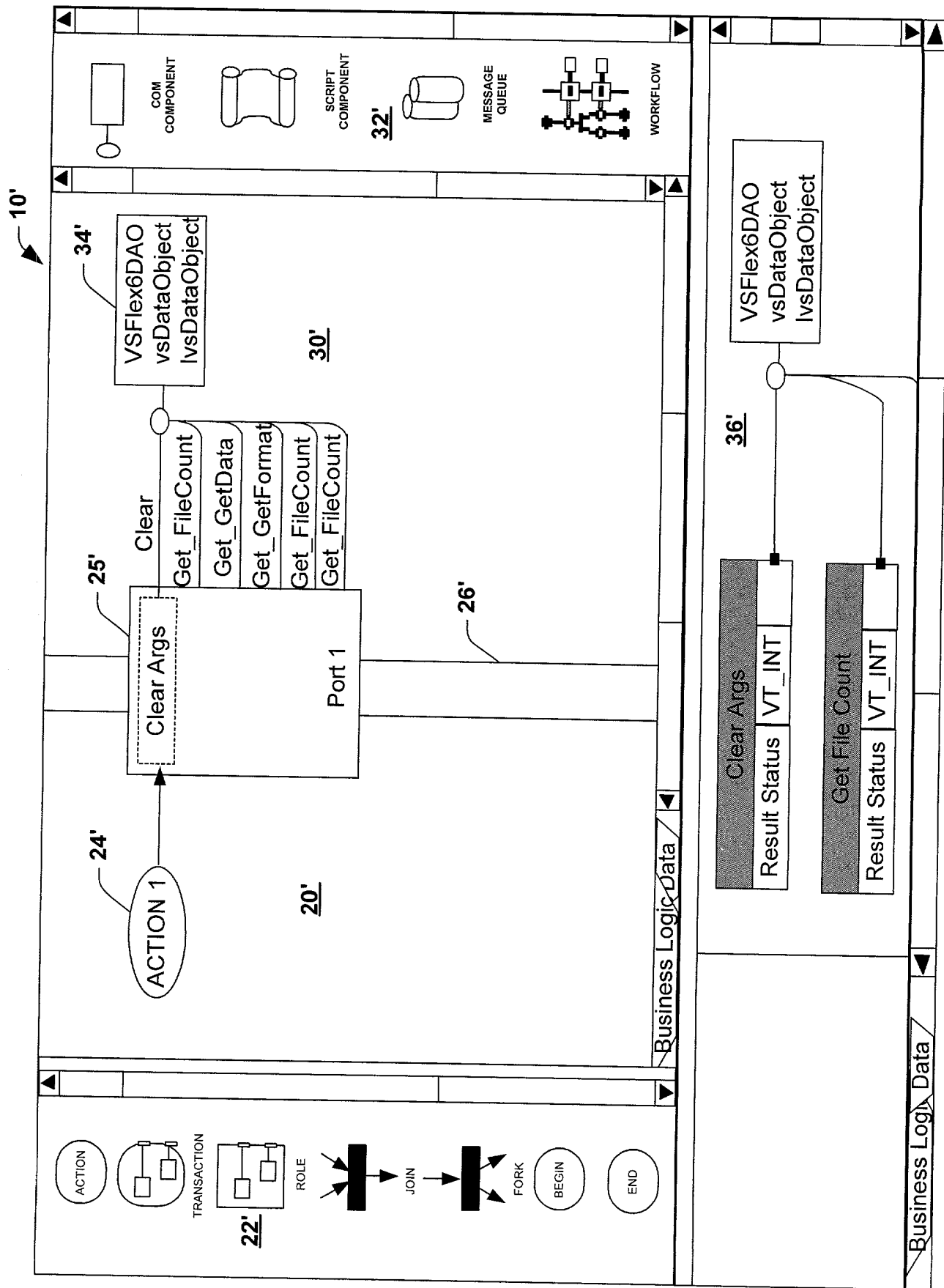


Fig. 2

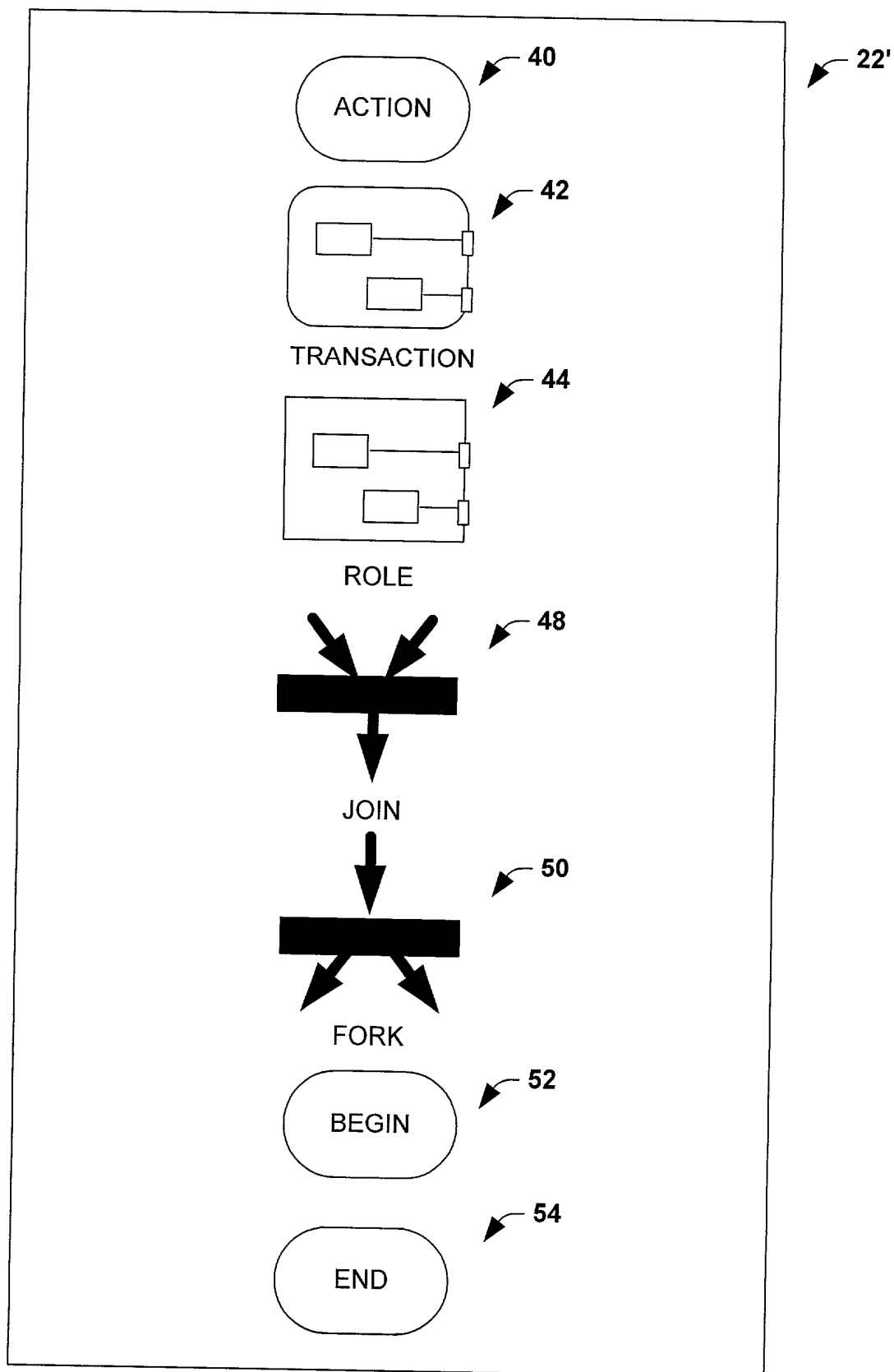
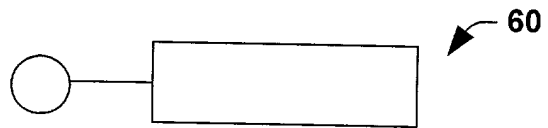
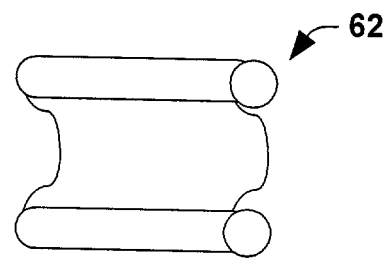


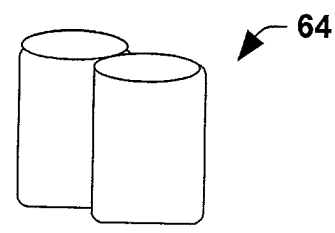
Fig. 3



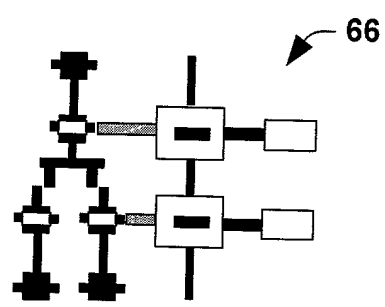
COM COMPONENT



SCRIPT COMPONENT



MESSAGE QUEUE



WORKFLOW

Fig. 4

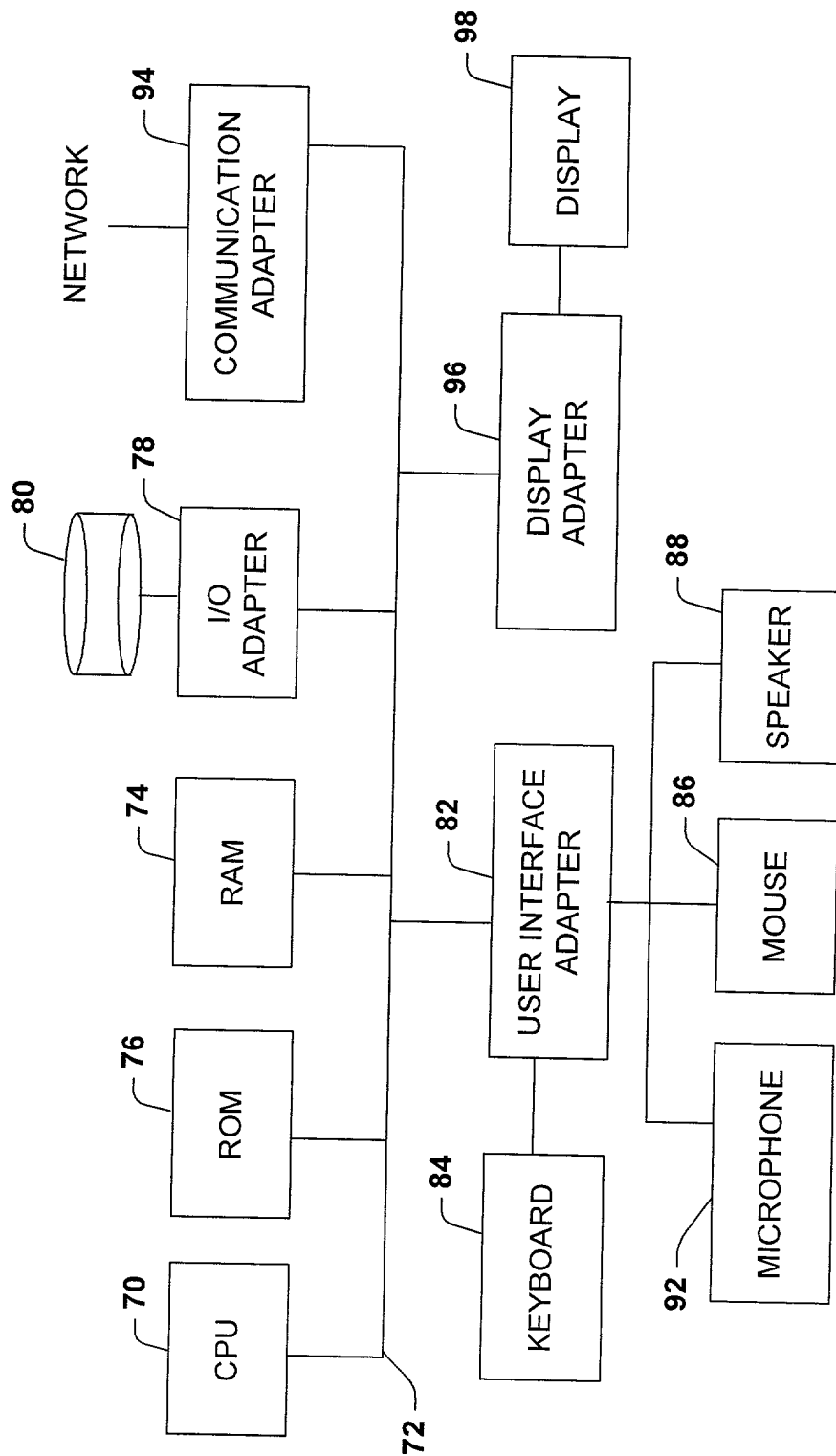


Fig. 5a

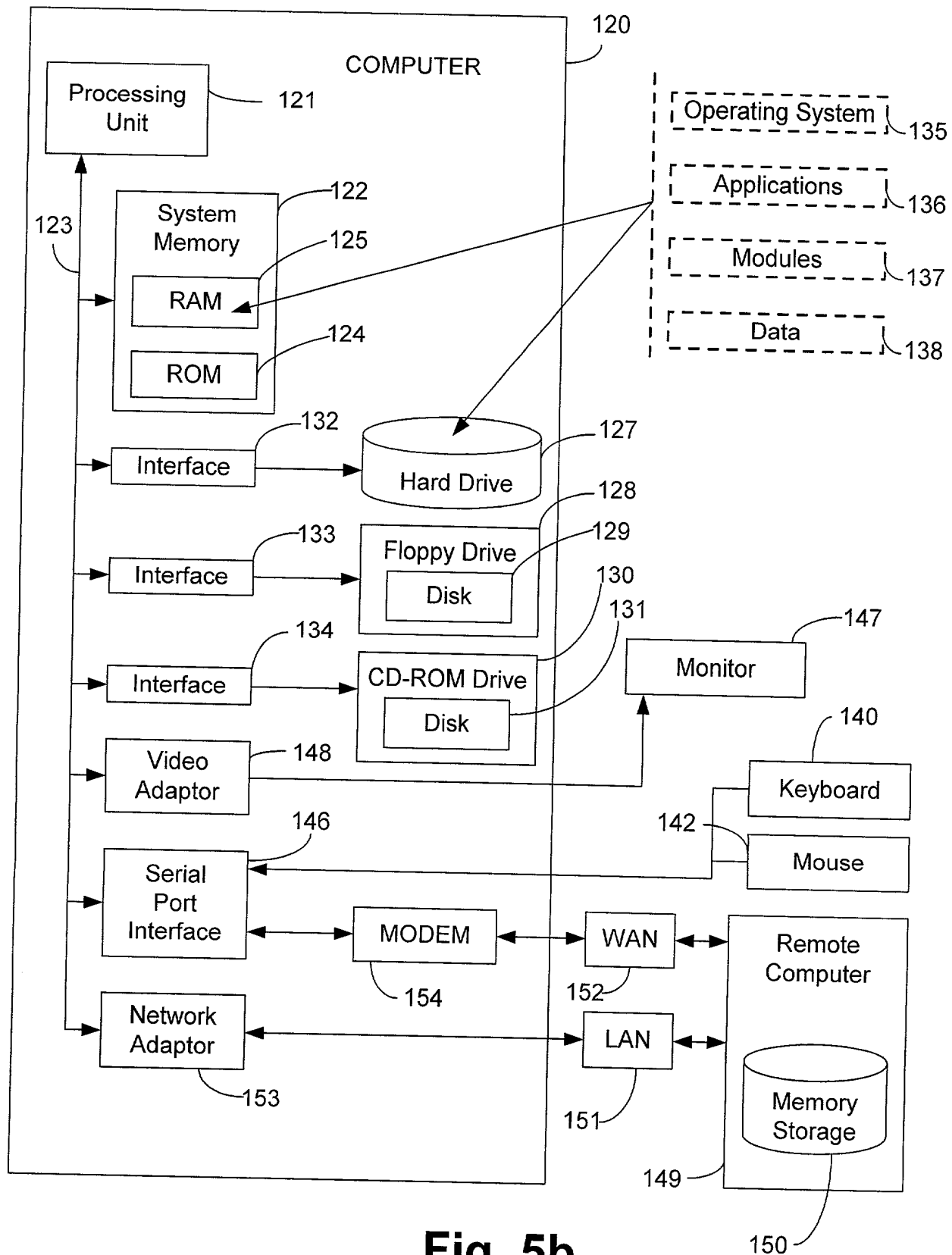


Fig. 5b

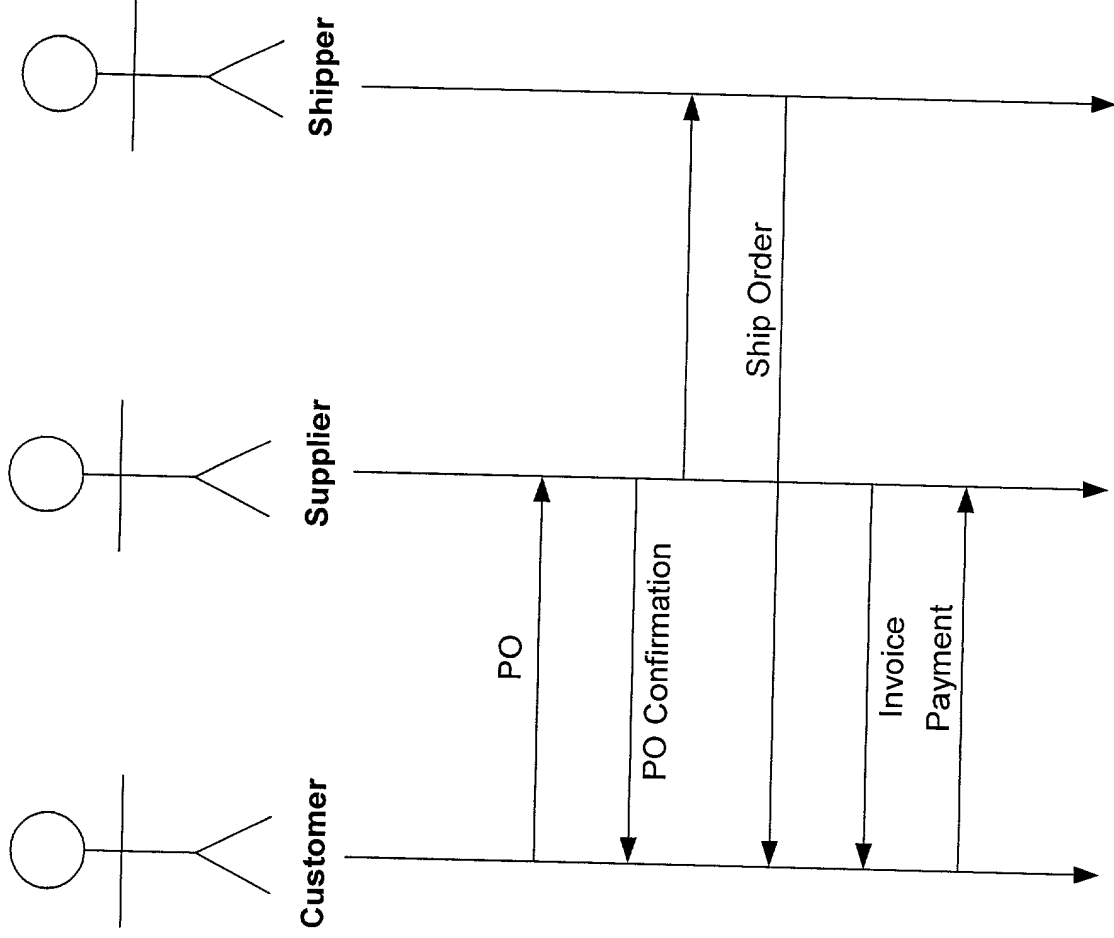


Fig. 6a

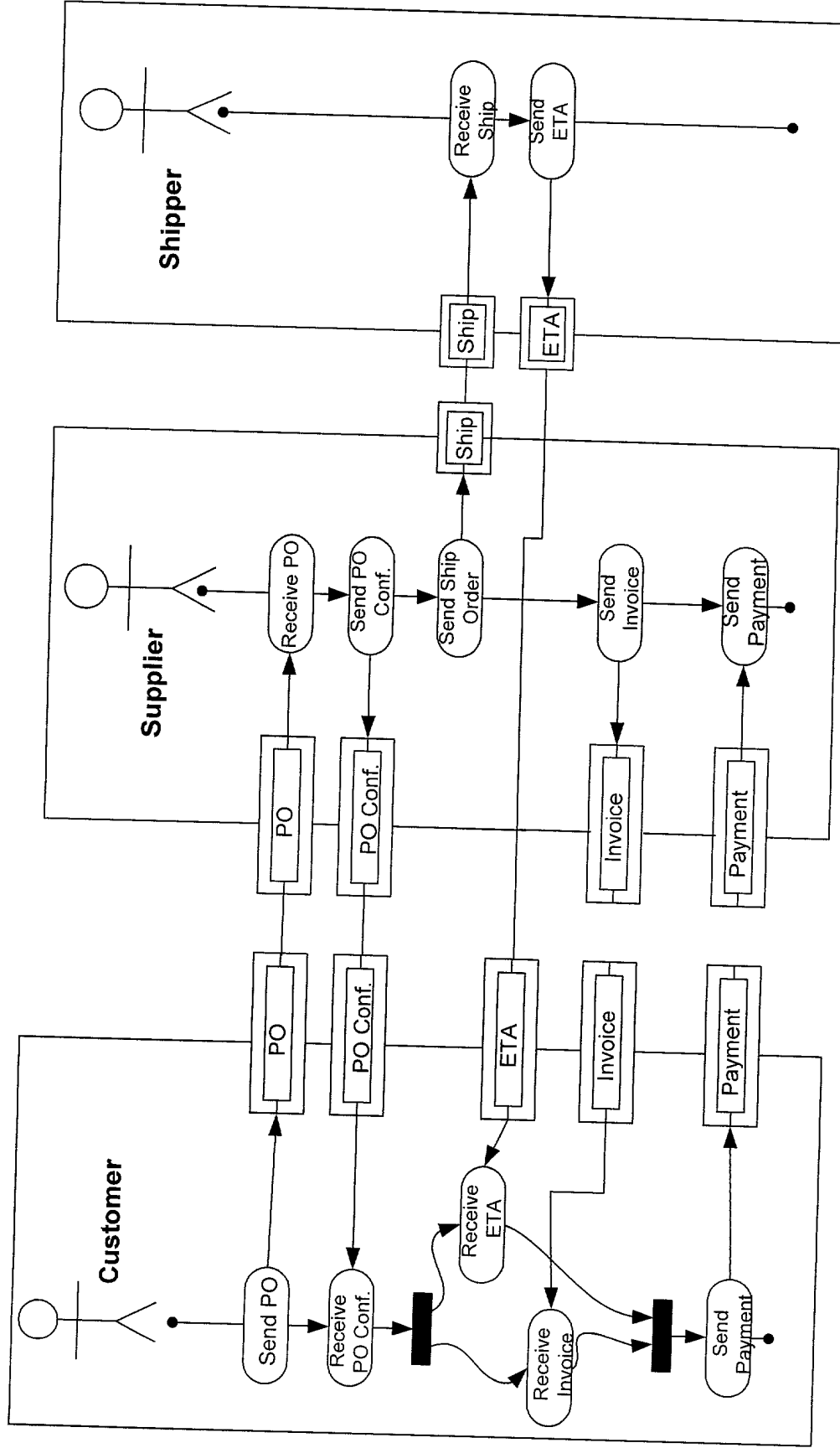
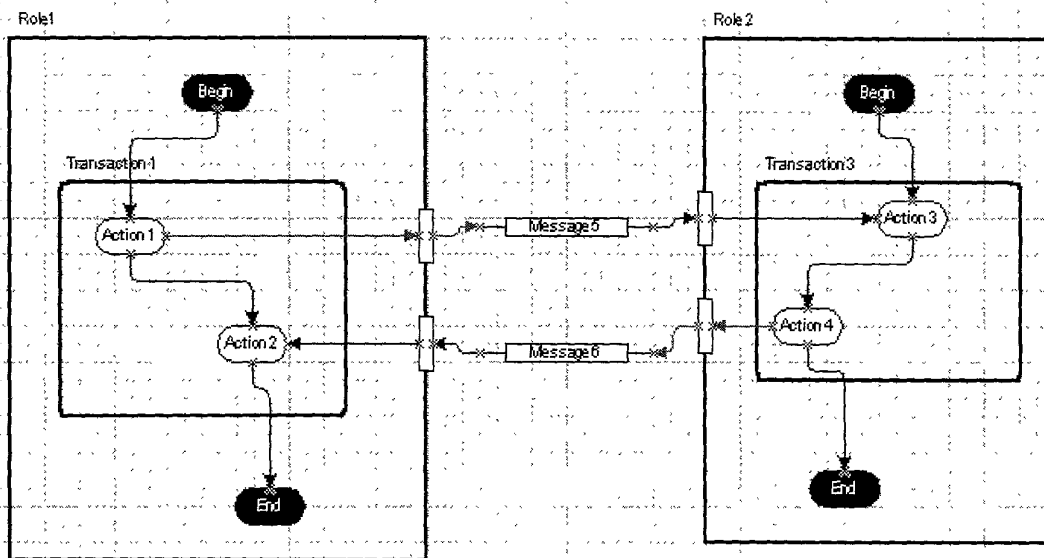
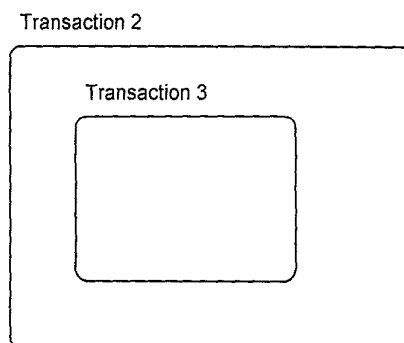


Fig. 6b

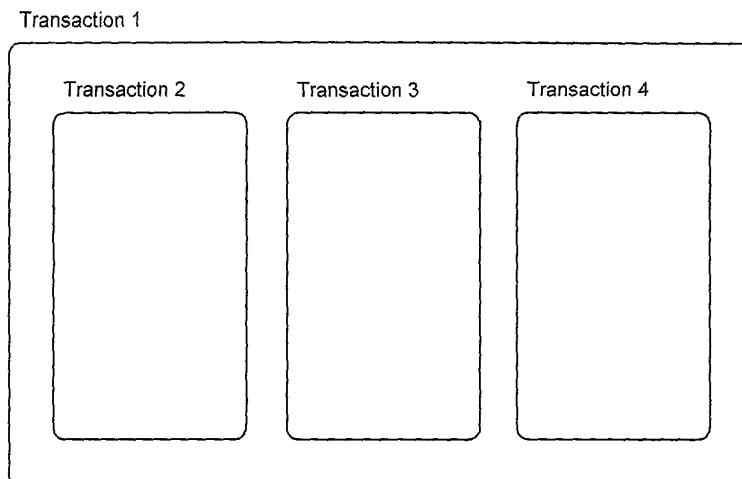




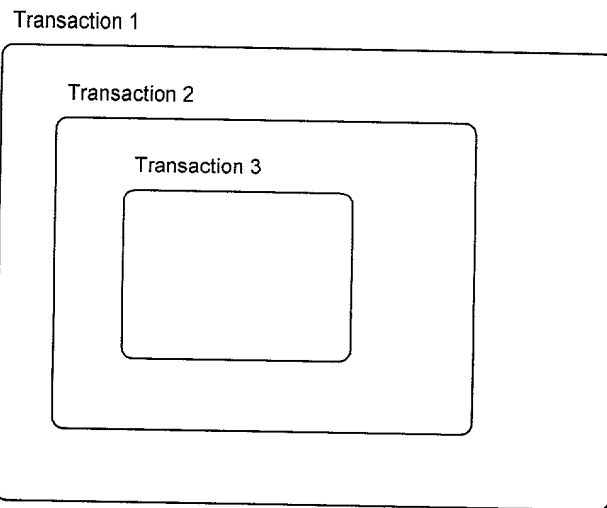
**Fig. 7a**



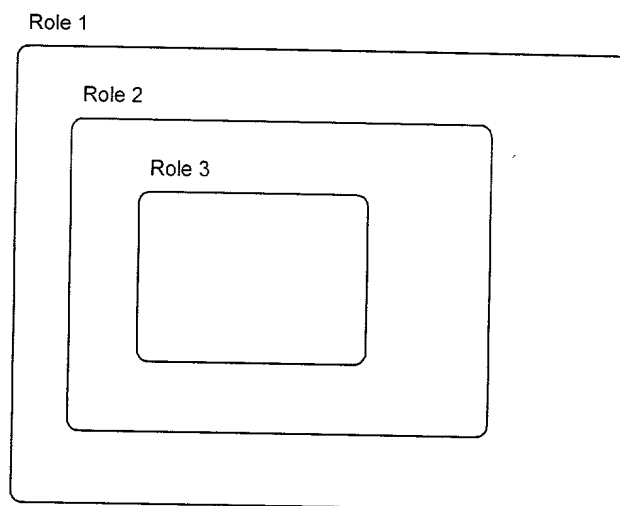
**Fig. 7b**



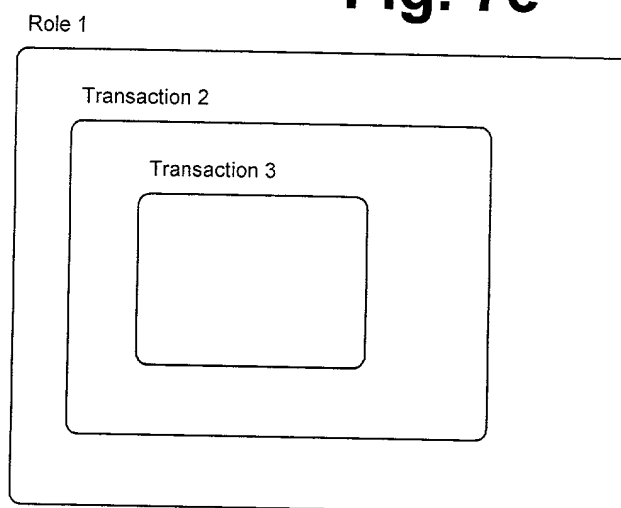
**Fig. 7c**



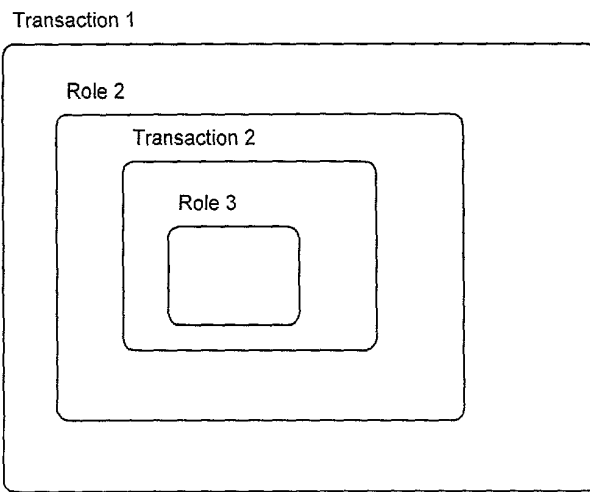
**Fig. 7d**



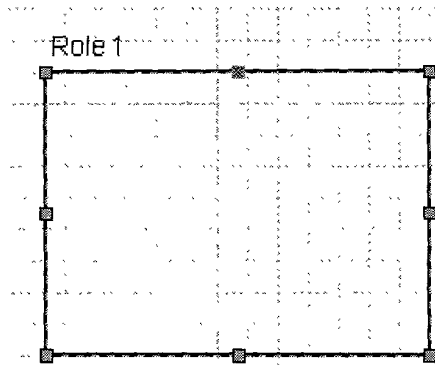
**Fig. 7e**



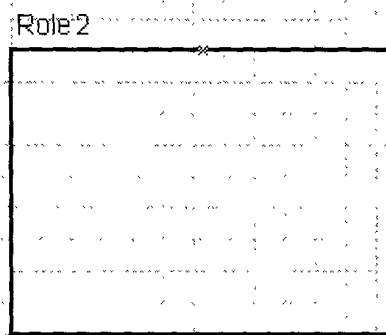
**Fig. 7f**



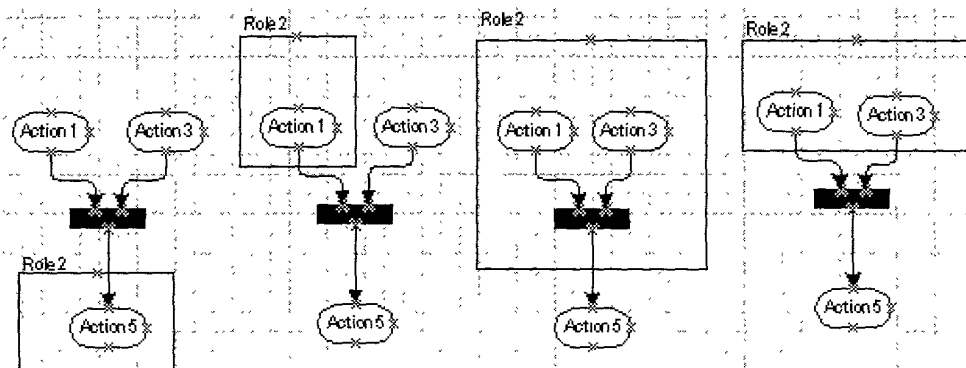
**Fig. 7g**



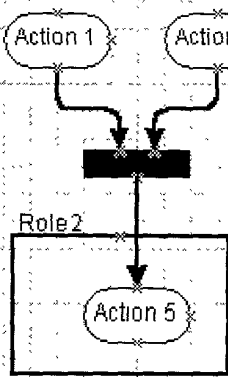
**Fig. 8a**



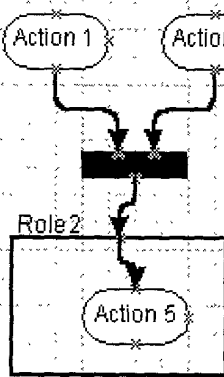
**Fig. 8b**



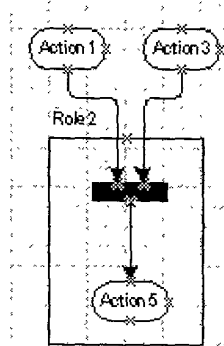
**Fig. 8c**



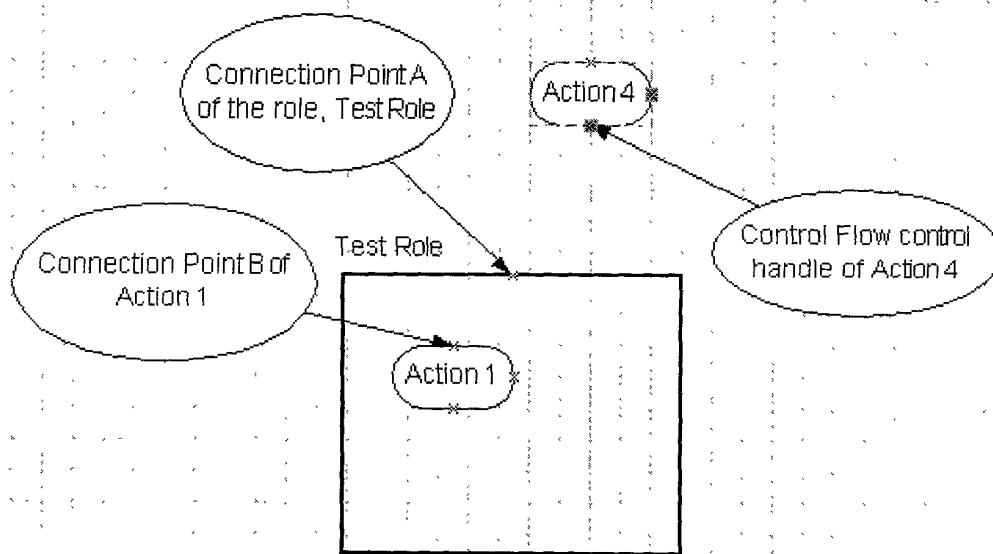
**Fig. 8d**



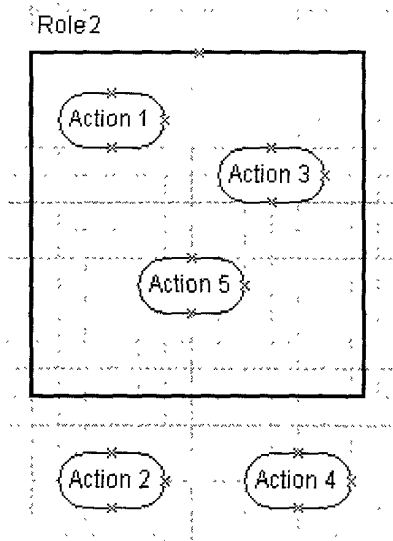
**Fig. 8e**



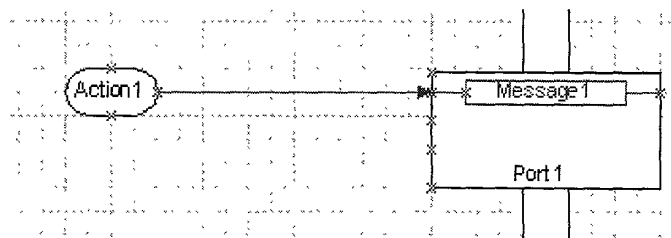
**Fig. 8f**



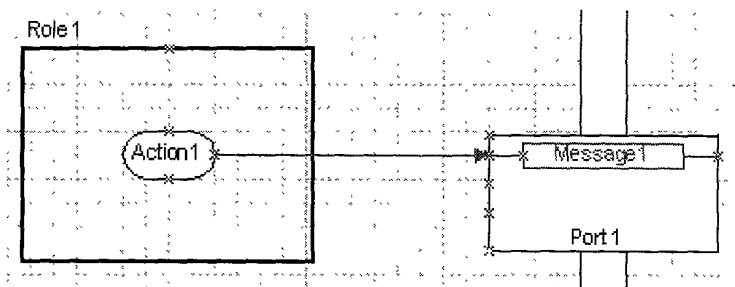
**Fig. 9**



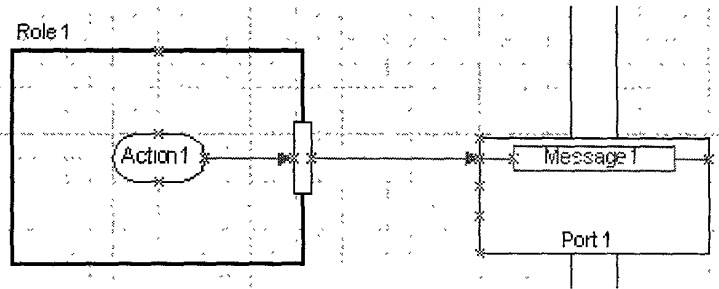
**Fig. 10**



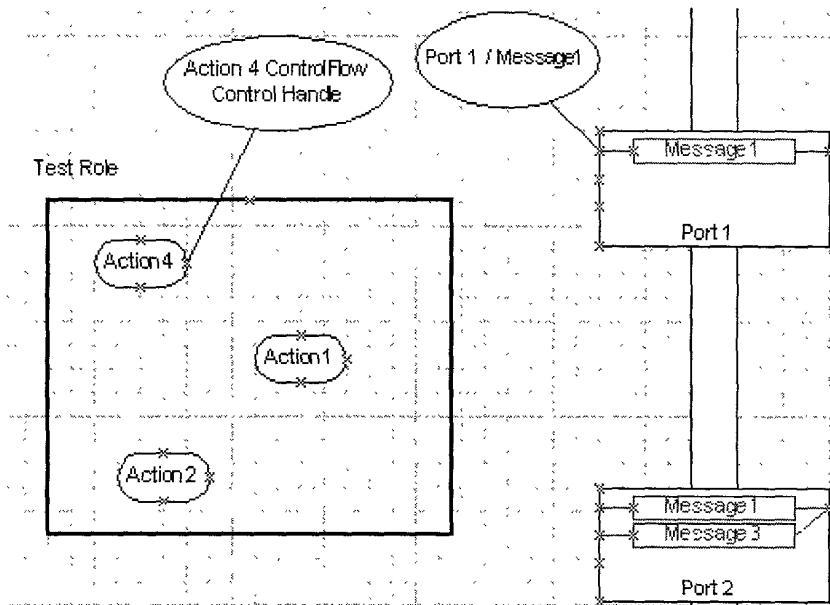
**Fig. 11a**



**Fig. 11b**

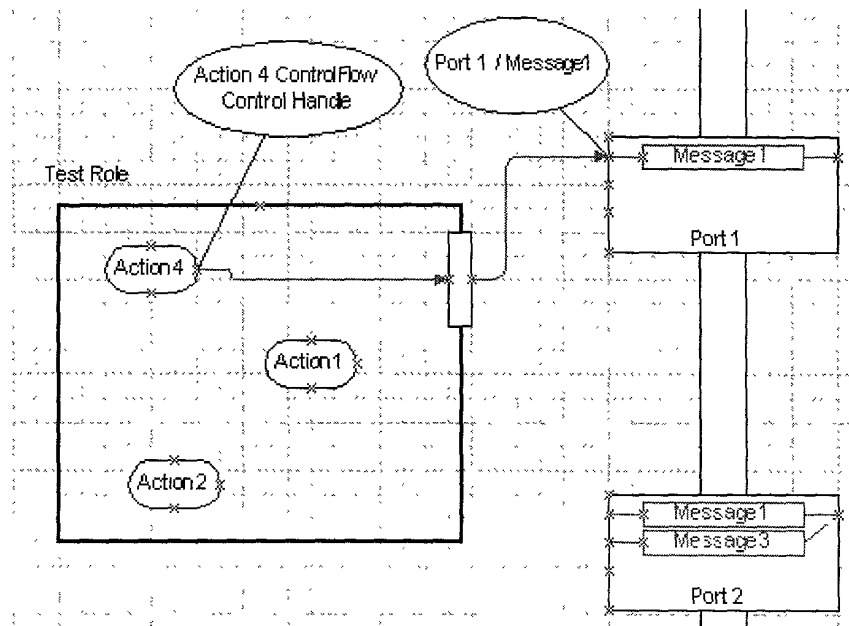


**Fig. 11c**

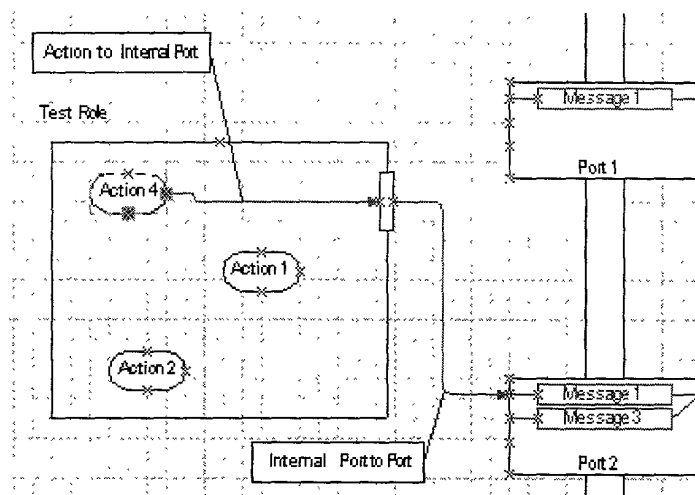


**Fig. 12a**

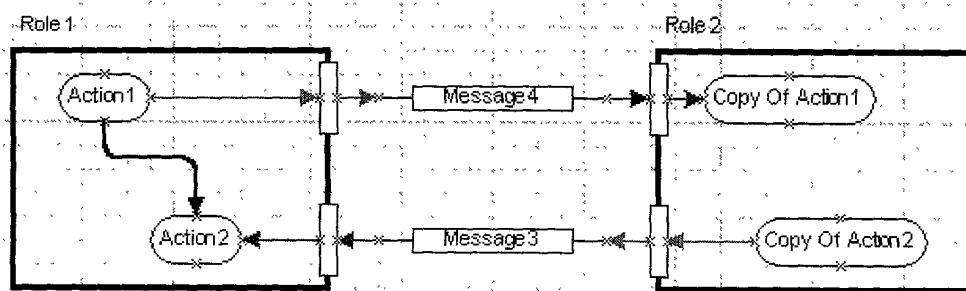
Downloaded from ascelibrary.org by University of California, San Diego on 06/01/15



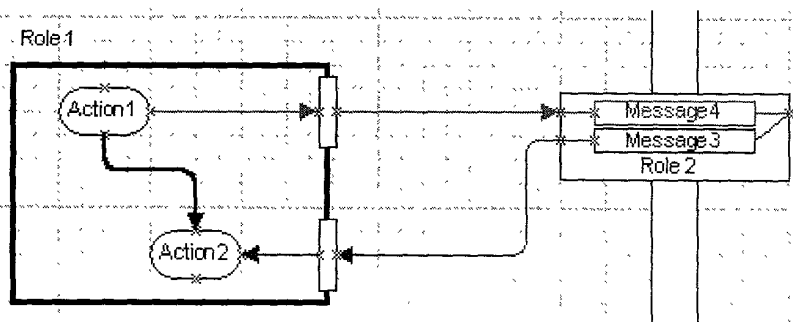
**Fig. 12b**



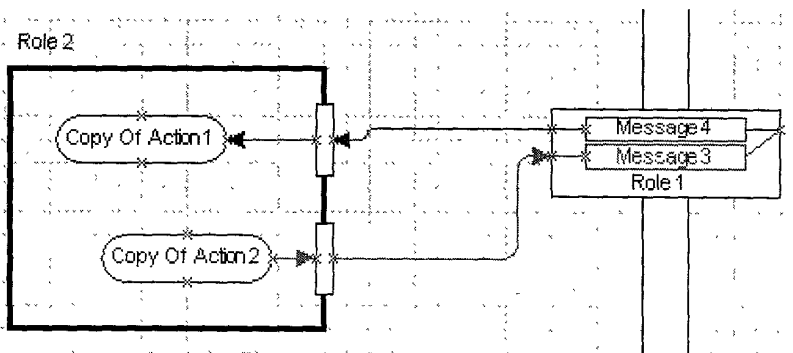
**Fig. 13**



**Fig. 14a**



**Fig. 14b**



**Fig. 14c**

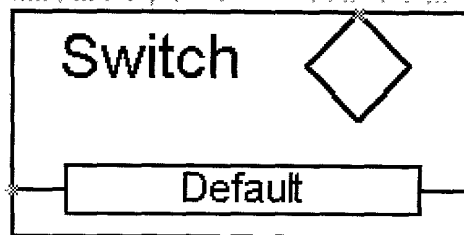


**Transaction Properties**

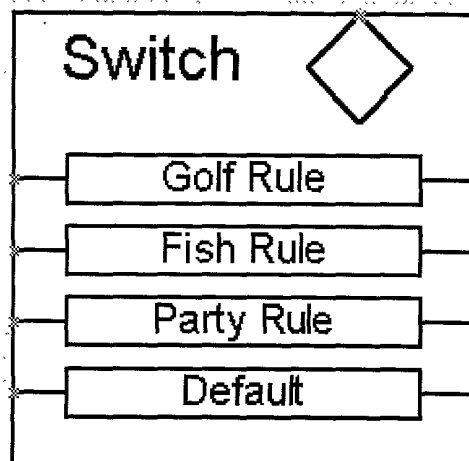
Property	Value
Name	Transaction 1
Create new instances as needed	False

Catch: ☒ Enabled 
 Compensation: ☐ Enabled

**Fig. 15**



**Fig. 16a**



**Fig. 16b**

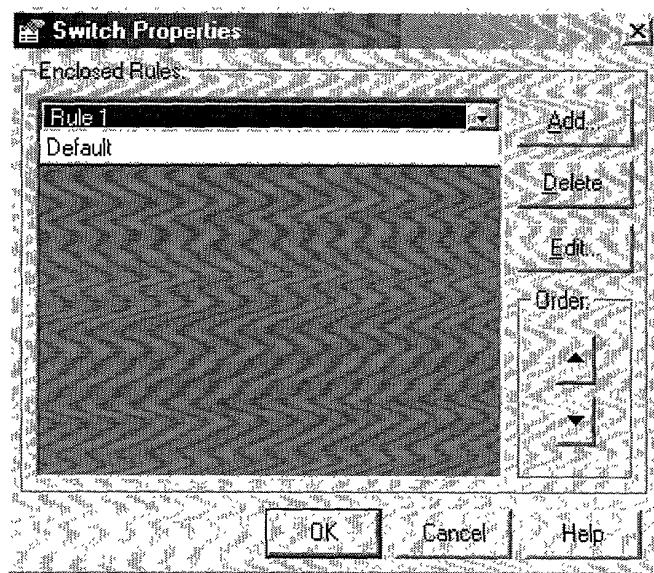


Fig. 17

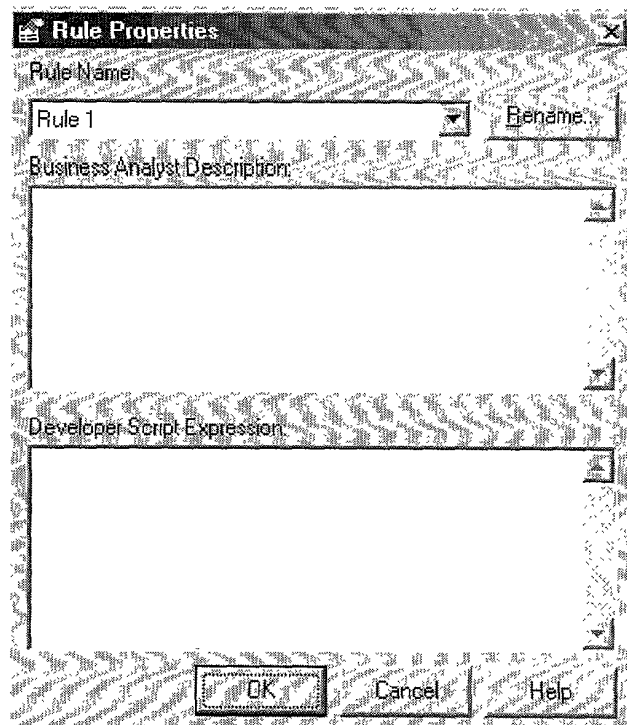
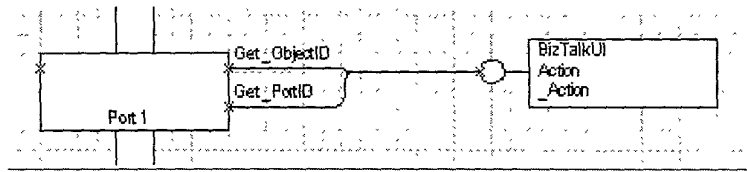
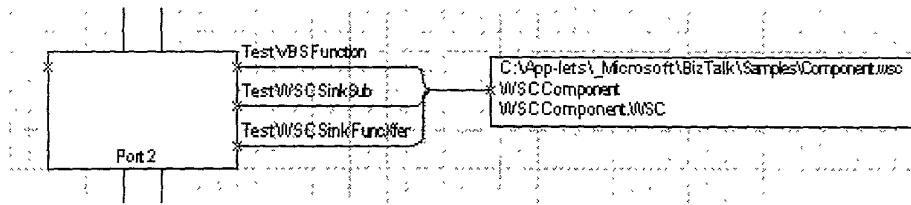


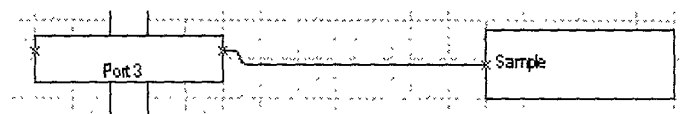
Fig. 18



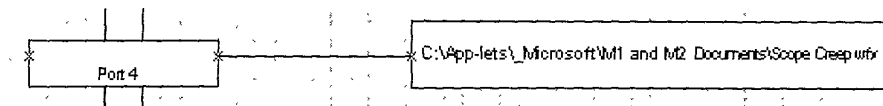
**Fig. 19a**



**Fig. 19b**



**Fig. 19c**



**Fig. 19d**

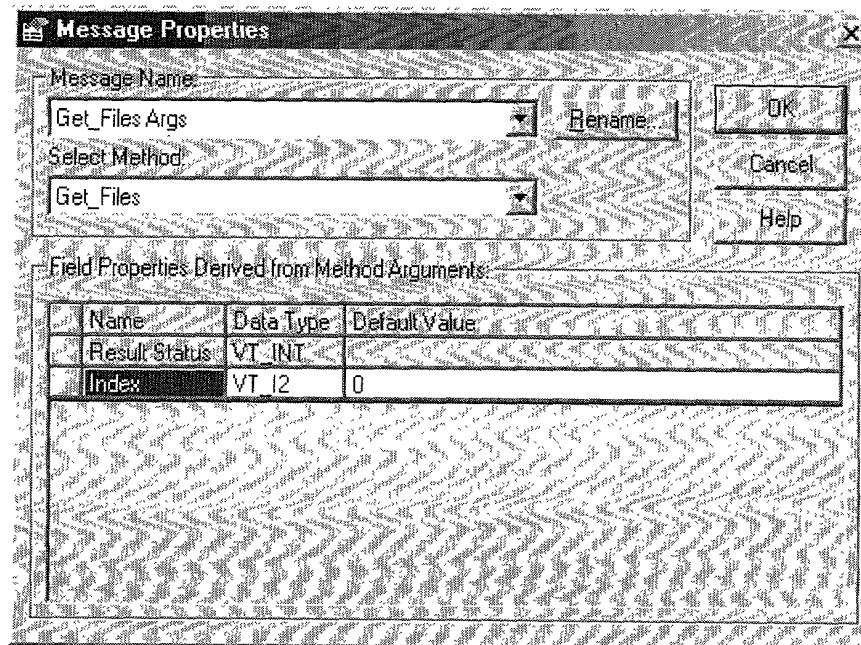


Fig. 20a

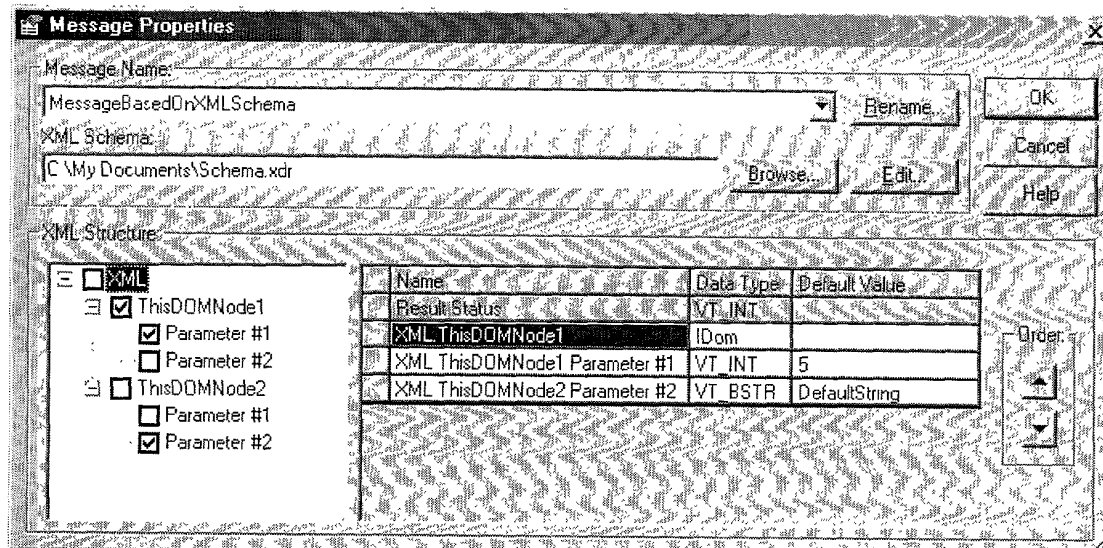


Fig. 20b

00000153-030601

**Message Properties**

Message Name:  
CallMessageExample Args

OK  
Cancel  
Help

CALL Parameters:

Ports:

Called Schedule	Current Schedule
Microsoft	Port 1
Dell	

Messages:

Called Schedule	Current Schedule
Send PO	Message 1
Receive Acknowl	Message 2

Transactions:

Called Schedule	Current Schedule
Transaction 1	Transaction 2
Transaction 2	Transaction 1
Transaction 3	Transaction 3
Transaction 4	

Fig. 20c

**Port References Message Properties**

Enclosed Ports:

Port 1
Port 2
Port 3
Port 4

Edit...

Order:

OK Cancel Help

Fig. 20d

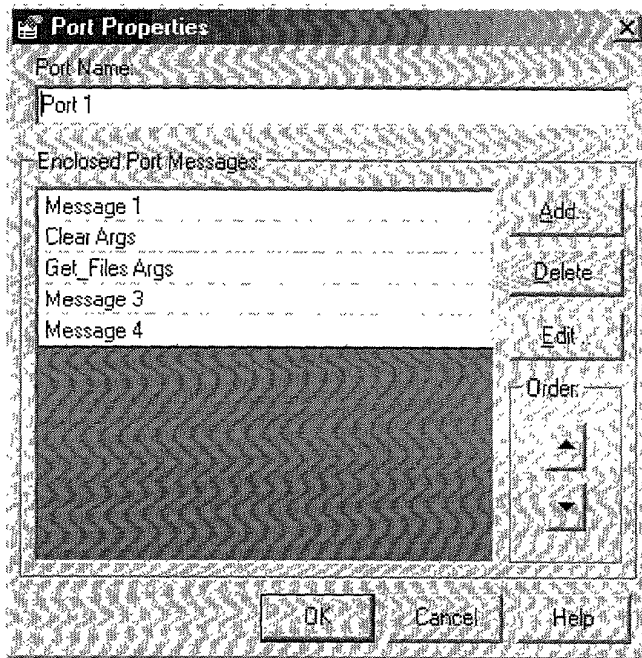


Fig. 21

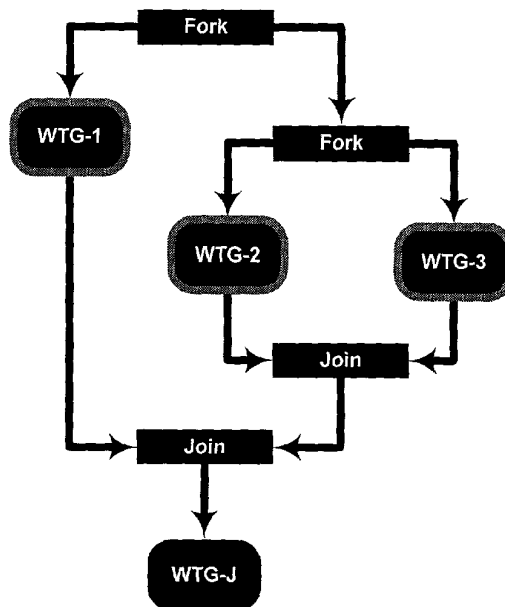


Fig. 22

```

<connect>
  <partition>
     $\sigma(\delta(\text{WTG}_1, \text{source}(p_1, m_1)))$ 
    <connect>
      <partition>
         $\sigma(\delta(\text{WTG}_2, \text{source}(p_2, m_2)))$ 
         $\sigma(\delta(\text{WTG}_3, \text{source}(p_3, m_3)))$ 
      </partition>
      <sequence>
        <task choice="all">
           $\sigma(\text{sink}(p_2', m_2'))$ 
           $\sigma(\text{sink}(p_3', m_3'))$ 
        </task>
        <zero/> <!-- This is the inner Continuation -->
      </sequence>
      <connectionList>
        ports  $p_2$  and  $p_3$  with ports  $p_2'$  and  $p_3'$ 
      </connectionList>
    </connect>
  </partition>
  <sequence>
    <task choice="all">
       $\sigma(\text{sink}(p_1', m_1'))$ 
    </task>
     $\sigma(\text{WTG}_j)$  <!-- Outer Continuation -->
  </sequence>
  <connectionList>
    port  $p_1$  with port  $p_1'$ 
  </connectionList>
</connect>

```

**Fig. 23**

### SLANG

schedule	::= header? process? contextRef?
header	::= portList? messageList? contextList?
process	::= zero   sequence   switch   map   copy   partition   connect   cut
portList	::= port*
messageList	::= message*
contextList	::= context*
zero	::= zero
sequence	::= genericAction* process? contextRef?
genericAction	::= silence   action   task   call   return   release
silence	::= silence
action	::= source   sink
source	::= portRef messageRef contextRef?
sink	::= portRef messageRef contextRef?
task	::= action* contextRef?
call	::= schedRef portRef* messageRef* contextRef?
switch	::= branch* (default process) ? contextRef?
branch	::= case process
case	::= ruleRef msgRef msgRef
map	::= process assignmentList? contextRef?
assignmentList	::= assignment*
assignment	::= messageRef portRef
copy	::= process contextRef?
partition	::= process* contextRef?
connect	::= process process connectionList contextRef?
connectionList	::= connection*
connection	::= portRef portRef
cut	::= process process process contextRef?

**Fig. 24**